



**THE TREFAEL STONE, NR NEVERN, PEMBROKESHIRE  
ARCHAEOLOGICAL EXCAVATION AND RECORDING PROGRAMME**

**APRIL 2012**

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## 1.0 INTRODUCTION

Following excavation of this site in November 2010, the Trefael Stone is now considered to be a capstone that once covered a burial chamber, possibly a Portal Dolmen, Wales' earliest Neolithic burial-ritual monuments. The site has been designated a Scheduled Monument (Ref: PEM 313) and therefore Scheduled Monument Consent (SMC) was required for Season I in 2010. However, the intrusive programme that took place in September 2011 (Season II) was outside the Scheduled Monument area and SMC was not required.

Initially, an application to excavate a small area of land around the Trefael Stone was made to Cadw by Dr George Nash in April 2010. In June 2010 permission was given by Cadw, subject to a number of conditions that included a geophysical survey followed by a targeted 4 x 4 m excavation of the topsoil with exploratory slots (Cadw Ref: A-CAM001-02-QA849258/1). The 2011 season involved a number of intrusive and non-intrusive elements that included a geophysical survey of most of the field in which the Trefael Stone stands and the neighbouring field to the south and a GPS survey of all potential trenching. Based on the geophysical survey, two areas of high resistance close to the Trefael Stone were recorded and as a result two trenches were targeted over these areas.

A Project Design outlining the excavation programme was submitted to Cadw. This document adhered to guidance set-out within the IfA's *Standard and Guidance for Archaeological Excavation* (2008) and legislation within Welsh Circular 60/96. In addition, a risk assessment was prepared and co-signed by the project directors.

The results of the 2011 excavation season are outlined and discussed in this report including all post-excavation analysis and specialist reports (including ceramics, lithics/stone and geophysics).

The excavation programme was undertaken between 20<sup>th</sup> and 27<sup>th</sup> September 2011.

## 2.0 GEOLOGY

Based on the soil survey of England & Wales (1983) the drift geology comprises a (Devensian till [TILLD] MANOD 611c, a well-drained fine loamy or fine silty soil overlying parent rock. The solid geology is a Nantmel Palaeozoic slate, mudstone and siltstone derivatives (NTM). Topographically, the site stands above the 125m contour with the land gradually rising to 160m to the east. The Pembrokeshire coastline is located c. 2km to the north-west.

### **3.0 ARCHAEOLOGICAL AND HISTORICAL DEVELOPMENT OF THE SITE**

- 3.1 The Neolithic monuments of south-west Wales number around 48 with another 50 classified as possible, missing or lost monuments (Barker 1992, Children and Nash 1997, Nash 2006). All monuments appear to be within significant clusters but vary in architectural form (Children & Nash 1997).
- 3.2 The Trefael Stone, located within the Afon Nevern group, stands on a flat parcel of land north of the village of Nevern (NGR SN 1030 4030). The stone has been designated a Scheduled Monument (Cadw Ref: PEM 32, HER Ref: 1120) and comprises a single flat monolith, possibly a capstone belonging to a burial monument and stands around 130m AOD. Surrounding the stone (prior to excavation) was an area of loose angular and sub-angular stone, much of which was abutting the lower western surface of the stone. Within this area, the ground had been eroded away, probably by livestock, using it as a means of shelter.
- 3.3 The site is located on land belonging to Coedfryn Farm and was first recorded by W.F. Grimes (1929, 31 & 277). Until recently the upper surface of this stone was recorded as being covered with up to 45 shallow cupmarks, each with a mean diameter of c. 5cm (the largest is c. 10 cm in diameter). Following the 2010 excavation this number had been increased to 75.
- 3.4 According to Lynch (1972, 79), this now tilted stone may have once formed the capstone to a burial-ritual monument. The site lies within one of South-west Wales' core monument areas. Less than three kilometres to the north-west are the two standing monuments of Llech y Dribedd (PEM 1) and Trelyffaint (PEM 2), whilst to the south and east are a further four monuments including Pentre Ifan (3.3 km). One of the capstones of the double dolmen of Trelyffaint is carved with over 30 cupmarks.
- 3.5 The Trefael Stone in the recent past appears to have been severely damaged on the right hand side, probably the result of ploughing. A large stone flake measuring around 0.40 x 0.35 m has been sheered and may have contained further rock-art. However, the 2010 excavation programme did not expose any evidence of this damage.
- 3.6 In November 2010, The Welsh Rock Art Organisation (WRAO) team conducted a small excavation within the south-eastern side of the monument. The 4m x 4m trench extended to the face of the former capstone. Revealed from this trench were the remains of a tightly-compacted cairn rubble spread that formed the lower section of a kidney-shaped mound. Within those areas where cairn was not present, the predominant stone was white quartz, suggesting the presence of a pavement. Two slots were excavated in order to assess the presence of natural deposits and any later prehistoric land surface that might survive below the modern soils. The slot that abutted the Trefael Stone revealed an extensive cairn deposit. More important, the team uncovered a clear vertical cut which probably represents a later prehistoric event when the monument was dismantled and the capstone up-ended to form a standing stone. Finds from this season were limited, comprising several worked flints, the neck of a medieval ceramic flagon, a rubbing stone and two perforated shale beads. The

shale beads appear to be Mesolithic in date, suggesting that the Trefael site may have been in near-continuous use for over 6,000 years. Despite logistical problems owing to inclement weather and meagre finds, this season revealed the complexity of the site – it is clearly not just a standing stone. As a result the team decided to extend the excavation programme to include a further field season.

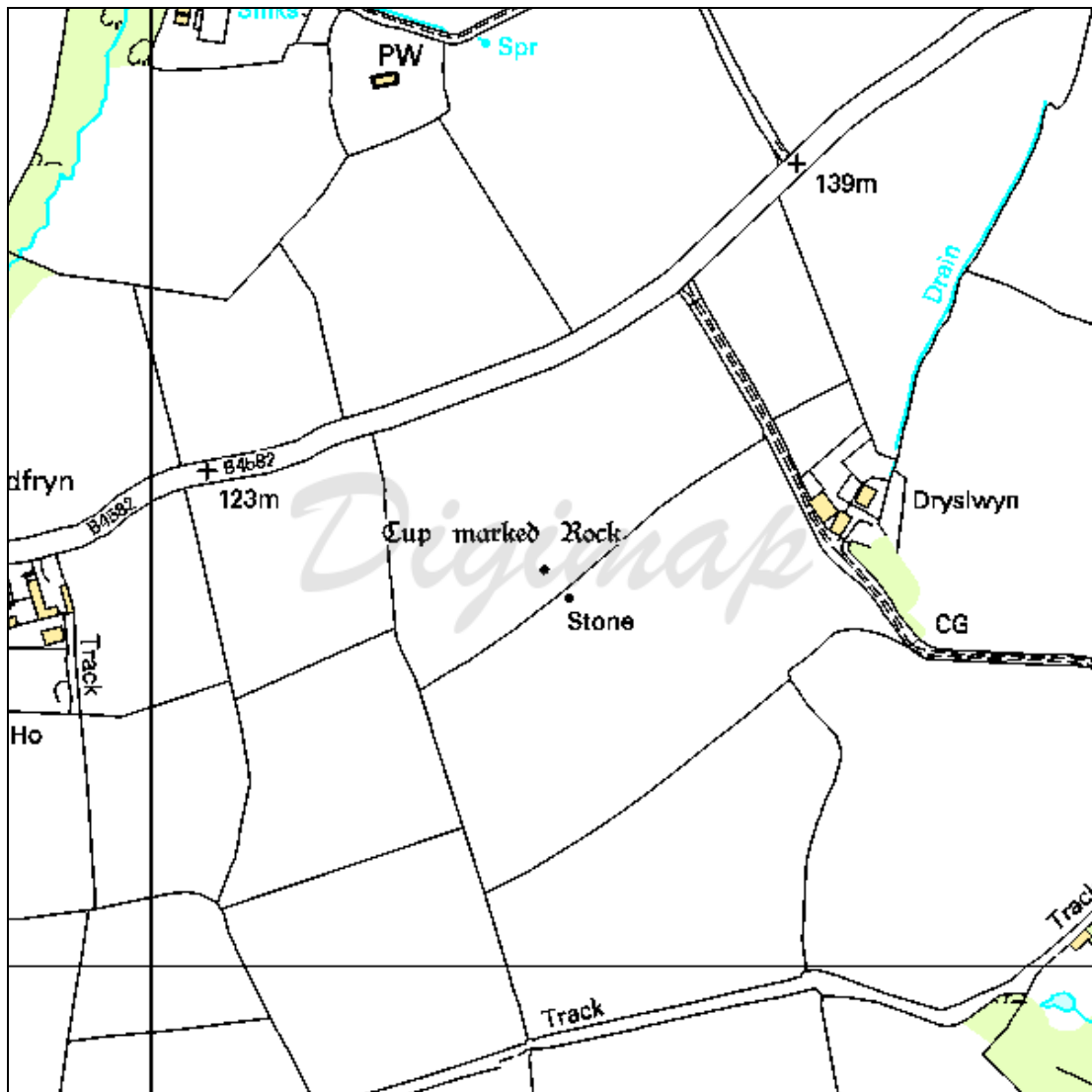


Figure 1. The Trefael Stone and neighbouring standing stone (map source: Edina)

- 3.7 A curiously positioned standing stone once stood within the adjacent field. This standing stone was possibly associated with the Trefael Stone (Figure 1). Although the provenance, age and use of this stone are unknown, the monolith was rediscovered towards the end of the 2011 season. According to the landowner, the stone had been removed some 30 years ago and placed on top of a field wall, immediately south-west of the gateway that provides access to the field that houses the Trefael Stone and the field to the south (see **Plate 1**). It is probable the Trefael Stone (as a burial-ritual monument) and the monolith (**Plate 7**) are contemporary.

#### 4.0 MAP REGRESSION

For this section of the report six maps were consulted; the earliest dating to 1889 and the publication of the 1<sup>st</sup> Edition Ordnance Survey (Scale 1:2500). On this map the site is marked as 'Stone' (Figure 2). There appears to have been little change in size and shape to the field in which it stands, however, absent is a gated access to the field immediately south (Field No. 176). Within the field to the south is marked another stone, probably a standing stone. This has been displaced and allegedly deposited within the field boundary that divides both fields.<sup>1</sup>

4.1 The Ordnance Survey map of 1907 (Scale 1:2500) shows little or no change to field boundaries (Figure 3). However, neither the Trefael Stone nor the standing stone in the southern field is marked; possibly an oversight made by the Ordnance Survey at this time. The National Grid series map of 1976 (Scale 1:100000) marks the Trefael Stone as 'Cup marked Rock'. The standing stone, once standing within the central section of the southern field appears to have been moved to a gated access, immediately south-east of the Trefael Stone, probably somewhere around the entrance area.

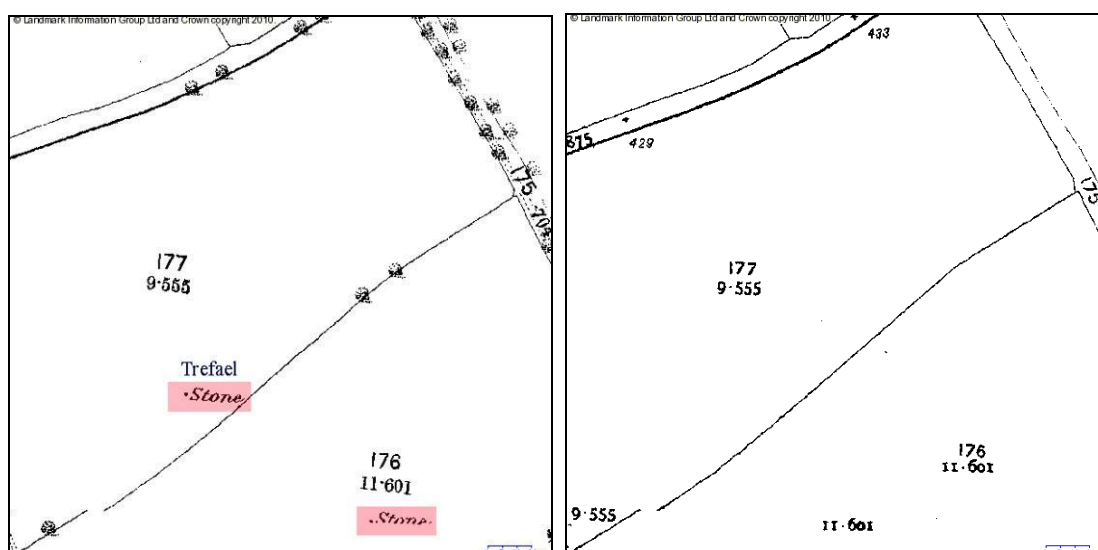


Figure 2. The Ordnance Survey plan of 1889 showing the location of the Trefael Stone (in red) and the standing stone in the southern field (*map source: Edina*)

Figure 3. The Ordnance Survey plan of 1907 with the Trefael Stone missing (present but not included within this map) (*map source: Edina*)

<sup>1</sup> Ms Gill Richards (*pers. comm.*)



Figure 4. A recent plan of the field showing the re-emergence of the second stone, located in the field to the south. Since the publication of this plan, the standing stone was moved (*map source: Edina*).

## 5.0 ARCHAEOLOGICAL SUMMARY FOR SEASON II

- 5.1 The programme of archaeology was divided into three areas: a non-intrusive programme of work that included a geophysical survey. Coupled with this was a GPS survey which accurately tied-in all trenching.<sup>2</sup> The final element was targeted excavation around two anomalies that were identified through geophysical survey; excavation comprised two rectilinear trenches (Trenches 1 & 2) and one small trench – Trench 3, which was amalgamated with Trench 2.
- 5.2 The geophysical survey, undertaken by members of the Cornwall Archaeology Society revealed clear sub-surface anomalies and as a result three trenches were targeted over these areas remains that included the ploughed-out remains of a human burial and associated ceramics in Trench 1 and a curious linear stone alignment and possible burial cist within Trench 2. These features are located several metres from the northern and western extent of the kidney-shaped mound and appear not to be directly connected (Figure 5).
- 5.3 Trenches 1 and 3 originally measured 3 x 2m. Trench 2 was later extended to include a trench section that was diagonal to the original trench, measuring 3.40 by 1.50m. Trench 3, excavated to trace the extent of a linear stone feature in Trench 2 measured 1 x 1m square. The overall trench dimensions for Trench 2 following amalgamation measured approximately 4 x 3m.
- 5.4 All official site-photography was undertaken by Adam Stanford, including all Aerial Cam imagery.

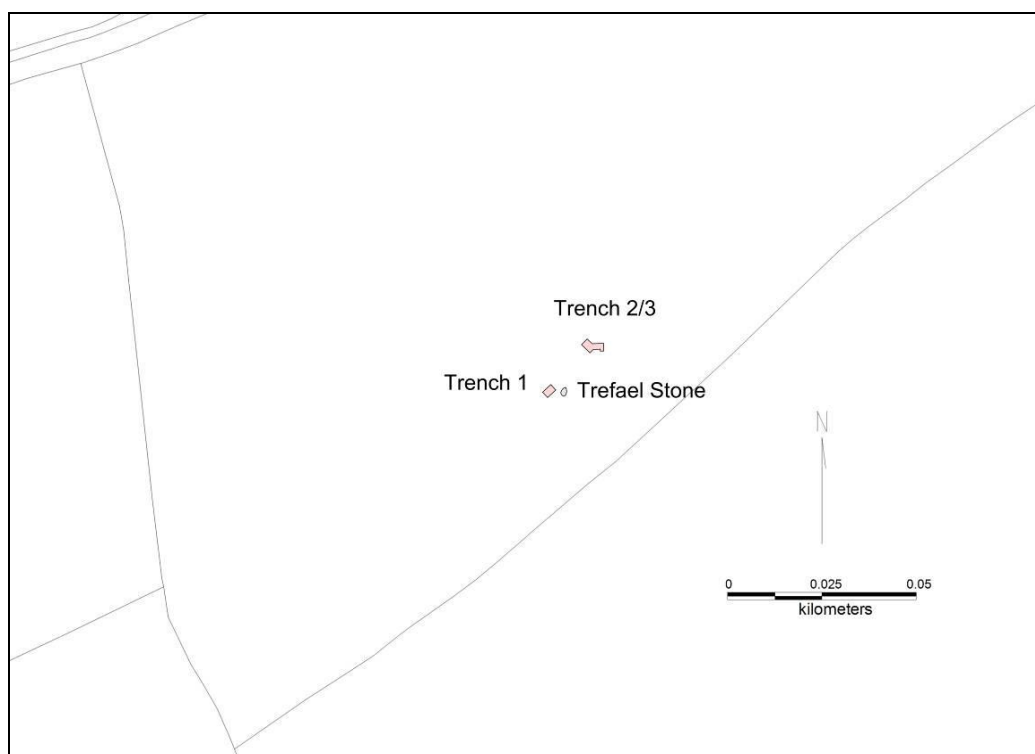


Figure 5. The Trefael Stone and the location of the trenching (*map source: Edina*)

<sup>2</sup> The value from a Temporary Bench Mark (TBM), located on a nearby gate post was established in 2010 and used in 2011.



## 6.0 METHODOLOGY

### 6.1 Geophysical Survey<sup>3</sup>

#### 6.2 Survey Aims

The aim of this phase of the project was to ascertain if there were any indications of archaeology related to the Trefael Stone in Field 1. The adjacent field, to the south (Field 2) was also to be surveyed (Figure 6). Historic Ordnance Survey mapping shows that a standing stone once stood in Field 2. The rationale was to ascertain if any sub-surface anomalies were present around the Trefael Stone and the area where the standing stone once stood. The total area surveyed was 13,200 m<sup>2</sup>. The site grid was pinpointed using a survey grade RTK-GPS system.

#### 6.3 Survey Methodology

The preferred survey apparatus (in accordance with English Heritage advice) was the Geoscan FM256 fluxgate gradiometer. The resistance method was in fact tested over two 20m x 20m grids but the results were disappointing and no further use was made of this method. An area with minimal magnetic variance was selected as a calibration/zeroing point from the gradiometer. The calibration was checked at regular intervals during the survey and the unit zeroed after each grid.

The Geoscan FM256 Gradiometer was set to take readings at 0.25m intervals with sensitivity readings at 0.1nT, to allow appropriate results and in line with English Heritage guidelines. The grid areas were to set at 20 x 20m squares. A north-west/south-east orientation was selected for the grid alignment and the gradiometer set to record traverses in a zigzag fashion, the apparatus was kept along a consistent orientation. Data was regularly uploaded to the Geoplot software package so interim results could be interpreted, quality checked and if any changes or extensions to the survey areas were required. In Field 1, a total of 12, 20 x 20m grids (totalling 4800m<sup>2</sup>) were surveyed. A total of 16, 20 x 20m grids (totalling 6400m<sup>2</sup>) were surveyed in Field 2.

#### 6.4 Initial survey

An initial survey was undertaken over an area of 40m x 40m around the Trefael stone in order to specifically target anomalies from excavation (Figure 5). As a result two targets were located by the magnetometer. The siting of Trench 1 was the result of a strong response immediately to the NW of the Trefael Stone (Feature 2 – Figure 7). This magnetic feature coincides with an ephemeral cropmark that was identified by both excavation and low-level aerial photography during the 2010 excavation. Trench 2 was located to explore a strong, bi-polar response to the north-east of the stone (Feature 6 – Figure 7).

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<sup>3</sup> Undertaken by Les Dodds, Phil Dell and Bryan Moore



## 6.5 Full survey

The full survey location is shown in Figure 6. The characteristics of the two fields are clearly different. In the southern field the responses are most likely associated with geology and modern metallic items. Detailed images of the enhanced survey results are shown in Figures 7 & 8. Field 1 in which the Trefael Stone stands has a number of large, strong, magnetic anomalies (shown in red). These are described in detail below (Features 1 to 8). These images have been generated from the raw survey data. The results were adjusted to remove any data collection errors and then enhanced to provide more readable (visual) results.

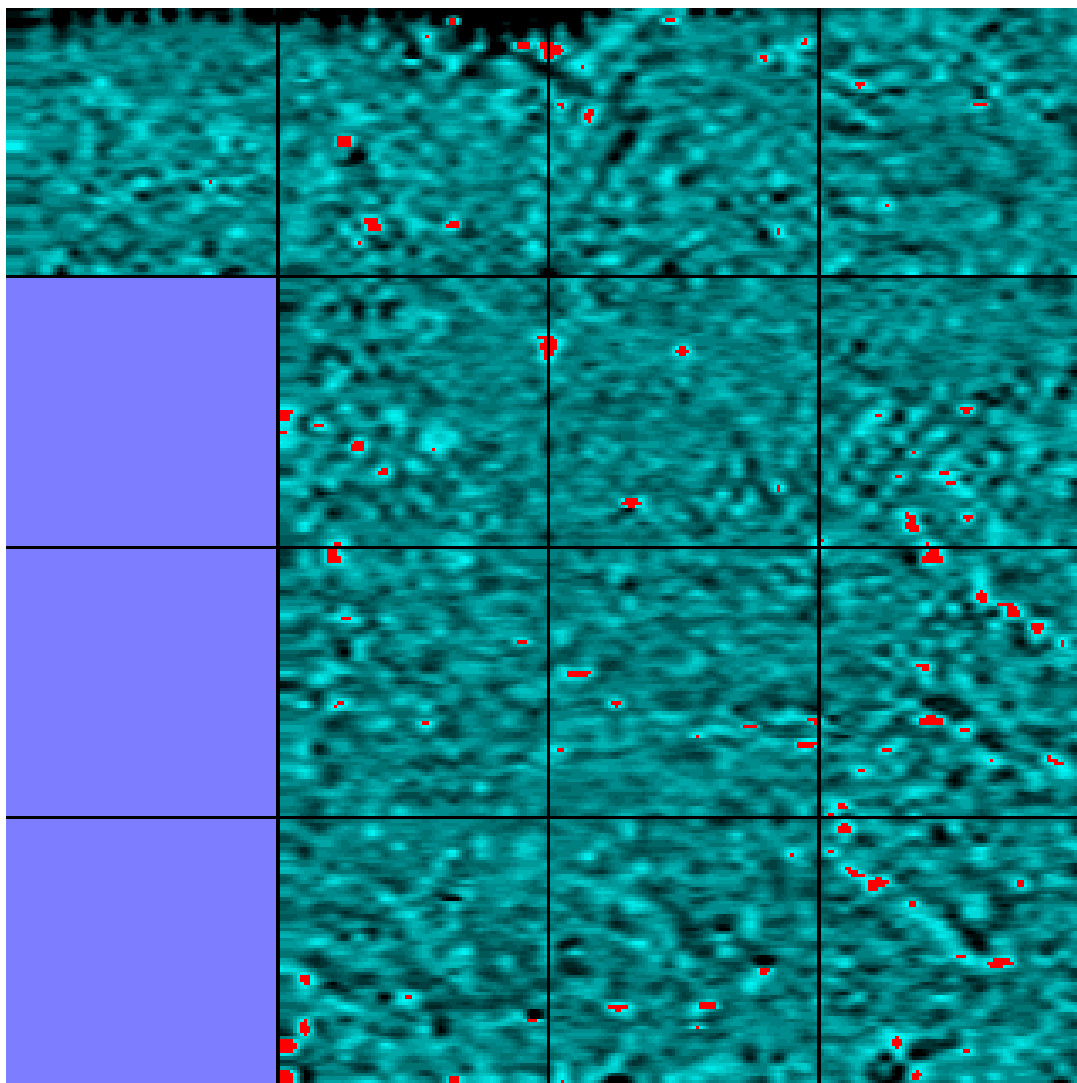


Figure 8 – Enhanced image of survey data for Field 2

## 6.6 Interpretation

### Feature 1 – Bipolar response to the north-west of the stone

Within several meters of the Trefael Stone in a north-west direction is a significant bipolar magnetic response. Trench 1 was positioned to explore this feature. The excavation produced possible cremation remains and ceramics.

### **Feature 2 – Linear response aligned north-west of the stone**

Linear feature (c. 8 to 10m in length) aligned north-east appears to have the stone as its origin. The response is strong and unipolar (positive) and is distinct from the other significant features identified by the survey (excluding Feature 8, see below). Low level aerial photography carried out in 2010 indicated that the cobbled pavement adjacent to the stone (discovered during the 2010 excavation) may continue as a slight cropmark in this area; this feature may be the cause of this response.

### **Feature 3**

The area to the south-east of, and immediately adjacent to the Trefael Stone exhibits a significant, negative magnetic response. This anomaly is probably the result of excavation disturbance during the 2010 season.

### **Features 4 to 7**

These anomalies are shown as large, bipolar magnetic responses. They are the most significant features found during the magnetic survey. Each anomaly appears to be between 2 to 4m in length and 1 to 2m in width.

An anomaly, referred to as Feature 4 was targeted for excavation - Trench 2. Excavation revealed that the strong magnetic response in this area was associated with burnt material possibly originating from a cist burial. The similarity of the magnetic response of Features 5, 6 and 7 possibly suggests similar sub-surface activity, i.e. burnt material incorporated into the fill of a pit or cist feature.

### **Feature 8 - Linear feature**

The strong linear feature at the south-west limit of the survey area is distinct from the other features found during the survey. It is not aligned with the present day field boundaries, and while there are other indications of probable non-geological features around it, the strong magnetic response is prominent. The unipolar response makes it unlikely to have its origin associated with ferrous material or intense heat. A likely interpretation is that this feature represents a ditch that has been infilled with material that is not unmodified, local topsoil.

## 6.7 **Excavation trenching**

- 6.8 This programme of archaeological excavation was initially developed in consultation with Cadw, the national archaeological heritage service for Wales and is incorporated into a redrafted Project Design that was issued in June 2010. Although SMC was not required for trenching during the 2011 season, the monitoring authorities were notified. Based on the geophysical survey undertaken in early September 2011, a number of potential anomalies were identified as potential areas for further intrusive investigation; two of which were located north of the Trefael Stone. Two trenches – Trenches 1 & 2 were excavated over these anomalies with a further trench – Trench 3 located to the north-east of Trench 2, over the possible terminus of a linear feature that uncovered in Trench 2. Later, both these two trenches were amalgamated to form a single trench – Trench 2.
- 6.9 In accordance to the project design all significant archaeological deposits, features and structures were excavated by hand. All archaeological deposits were recorded stratigraphically using a fully cross-referenced single context pro-forma recording system. Within each trench slots were excavated in order to ascertain any Neolithic surface and to assess the depth of natural deposition. The rationale of the trenching was to fully expose all visible significant archaeological deposits. Due to time constraints and the complexity of each trench (i.e. the uncovering of Later Prehistoric funerary archaeology), both trenches were not fully excavated and as result further excavation will occur during the 2012 season.
- 6.10 The trench location was tied into the site boundary and annotated onto digitised Ordnance Survey mapping, using GPS.
- 6.11 The photographic record comprised high-resolution digital images with a supporting index in accordance with IfA guidelines. The drawn record comprised scaled plans and sections of the trench (see below).

## 7.0 THE EXCAVATION

7.1 The excavation commenced between the 20<sup>th</sup> and 27<sup>th</sup> September 2011 and comprised of three strategically-placed trenches of varying size, located north of the Trefael Stone (Figure 5). Ground conditions were dry allowing the clear identification of soil colour, hue and texture.

### 7.2 TRENCH 1<sup>4</sup>

7.3 Recorded within Trench 1 were up to 11 archaeological contexts, the first of these was the topsoil (101). This deposit extended into all sections of the trench (and beyond) and comprised a loosely-compacted/friable, medium reddish brown course silty soil with occasional small rounded stones and white quartz fragments. This deposit measured 0.10m in thickness. Underlying (101) and extending into all sections of the trench and measuring 0.33 m in thickness was a buried plough soil, comprising a loosely-compacted light brown clayey course sandy soil. Within this deposit were occasional quartz, natural chert and frequent small angular stone inclusions. Underlying context (102) and extending into all sections of the trench was a sub soil (103) which measured 0.10 m in thickness. This moderately-compacted light reddish brown loamy soil contained occasional charcoal flecking, quartz pebbles, and small rounded pebbles. Finds from this deposit included occasional later prehistoric pottery (**Plate 3**).<sup>5</sup> Context (103) overlay natural deposits (111).

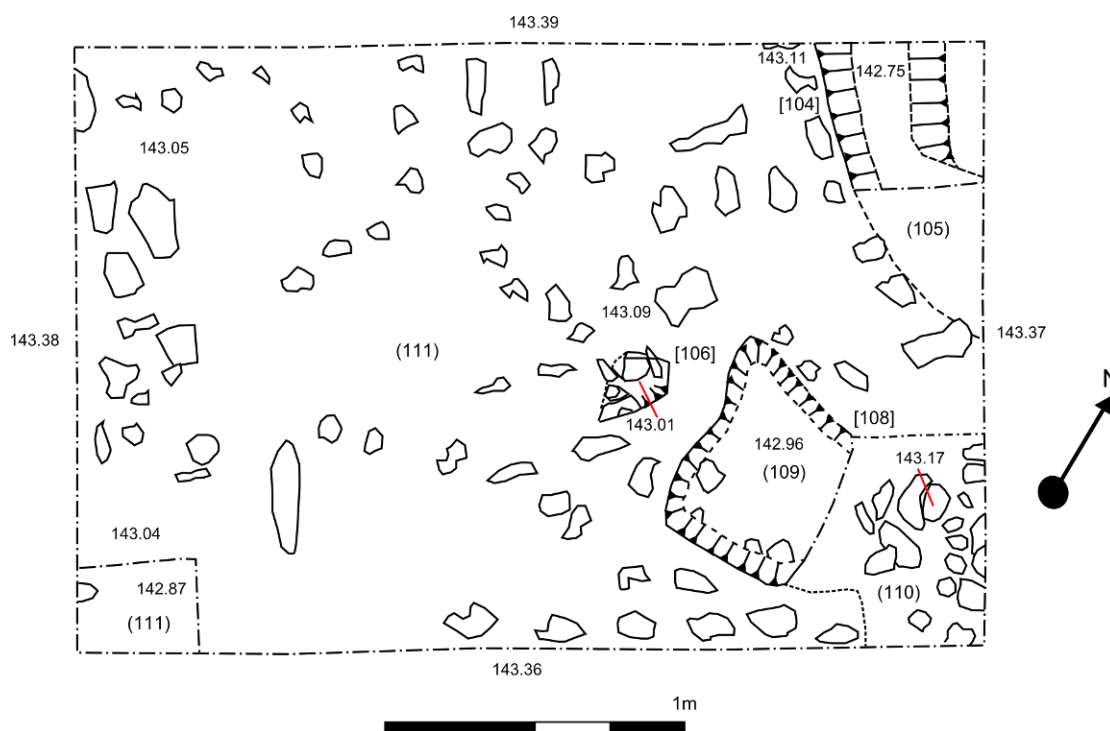


Figure 9. Plan of Trench 1

<sup>4</sup> Supervised by Thomas Wellicome

<sup>5</sup> This material is being currently being analysed by Dr Rick Peterson, University of Central Lancashire. A specialist report will appear in the 2012 interim report.

- 7.4 Located within the north-eastern section of the trench was the cut for a possible Later Prehistoric stone setting [104]. Based on the plan, this feature is sub-circular in plan (not fully exposed) and measured 0.80 x 0.50 by 0.36m in depth. In profile, the feature is V-shaped, orientated NW-SE and filled by Context (105) (Figure 10).

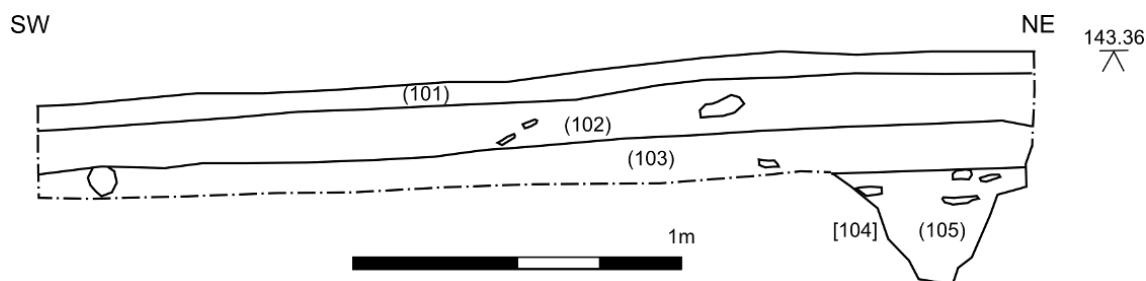


Figure 10. South-east facing section of Trench 1

- 7.5 The fill (105) comprised a loosely-compacted, mid-brown coarse sandy clayey soil with moderate to frequent small to medium sized angular stones and occasional shale. No cultural finds were identified from this context.
- 7.6 Located within the central area of the trench and probably physically detached from the Trefael Portal Dolmen is a cut for a possible pit or stake-hole [106]. This sub-circular feature, measuring 0.15 x 0.15 x 0.07 m in depth possessed a flat base but appeared to have been truncated by possible animal disturbance (from above the feature); sealed by Context (103). The fill (107) of this cut comprised a loosely- to moderately-compacted light brown sandy clayey soil with moderate quantities of naturally-deposited slate and shale and occasional rounded pebbles.
- 7.7 Located immediately east of feature [106] and extending into the eastern corner of the trench was a sub-rectangular cut [108], possibly the terminal end of a shallow ditch or gully.<sup>6</sup> This feature, measuring 1.0 x 0.61 and >0.30 m in depth possessed rounded corners and was oriented east-west and is possibly physically associated with the Portal Dolmen. The fill (109) comprised a loosely compacted mid-brown silty sandy clayey soil with occasional charcoal flecking, naturally accumulated slate and shale fragments and small sub-angular and sub-rounded stones. Also present was occasional Later Prehistoric pottery sherds and probable human bone (see **Plate 2**).
- 7.8 Within the eastern section of the ditch/gully were the probable remnants of a cairn spread that belongs to the Portal Dolmen. This deposit contained angular and sub-angular stones and occasional quartz that were within a loosely-compacted silty clayey soil. Also present

<sup>6</sup> This feature was not fully excavated due to the discovery of probable human bone.

was occasional Later Prehistoric pottery sherds possibly originating from the pottery activity within Context [106].

## 7.9 TRENCH 2<sup>7</sup>

7.10 Trench 2 was located north-east of the Trefael Stone and was the result of targeted geophysical anomalies (**Plate 4**, Figure 5). The trench was initially rectangular in plan but was extended and amalgamated with Trench 3 following the uncovering of a linear stone alignment (204). Recorded within this trench were 10 archaeological contexts. The first of these (201) was the top soil which extended into all sections of the trench (identical to Context 101). Underlying this context and extending into all trench sections was a sub-soil consisting of a moderately-compacted, mid-brown silty clayey soil (202) with moderate quantities of small to medium sized rounded stone inclusions. Overlying (202), in particular within the confines of the pit – cut [207] was a moderately-compacted, mid-brown mixture of sub-angular and rounded stones within a silty clayey matrix, measuring 3.0 x 2.0 by <0.30 m in thickness (this deposit was not fully excavated). The upper surface of this deposit appears to show limited animal disturbance.

## 7.11 The stone alignment

Located within the southern section of the trench (and trench extension) was the remains of an east-west stone alignment (Figure 11; see **Plates 5 & 6**). The alignment, measuring 3.05 x 0.80 and 0.35 m in thickness, is intermixed with a moderately-compacted, dark brown silty clayey soil with moderate quantities of small shale and stone inclusions (variable in origin, including quartz and river-worn/glacial cobbles). The full extent and nature of this structure is unknown. The stone alignment and cist (208) may sit upon natural deposition (205), although a full investigation of this area is required. Context (205) comprised a moderately-compacted orange to brown sandy clayey soil with occasional small round and sub-rounded stones. It is probable that same natural soils extend beyond the cut [207] for the stone alignment and cist (206).

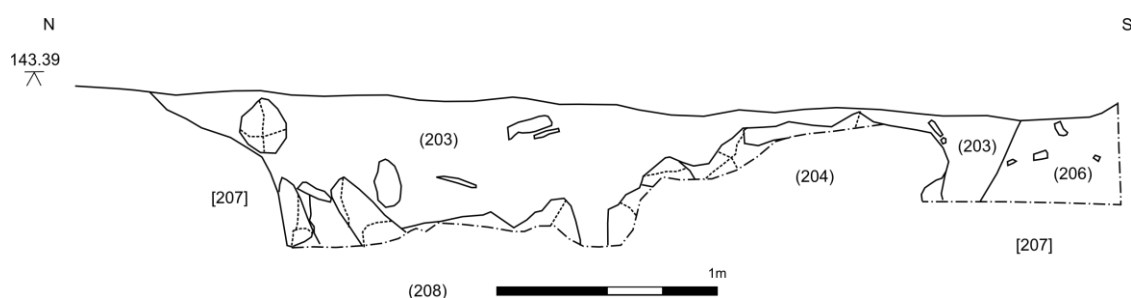


Figure 11. West-facing section showing the profile of the stone alignment (204)

<sup>7</sup> Supervised by Catherine Rees



### 7.12 The cist complex

Located within the western section of the trench and probably associated with the neighbouring stone alignment are the remains of a stone burial cist (207) – (211) (Figure 12). Due to time factors during the 2011 season, this structure was not fully excavated.<sup>8</sup> Based on the current plan, if one assumes that the stone alignment (204) (which has curvilinear sections – see Figure 11) is part of the cist complex, the overall dimensions within the trench plan is >3.80 x 2.0 by 0.60 m. The ‘monument’ is delineated by a probable oval cut [207] (partly exposed in this trench) and extends beyond Trench 2 (on the northern side).

The stone structure comprises a probable capstone that is supported by buried uprights. The capstone appears consistent with local geology and measures around 0.40 m in diameter. The uprights supporting the capstone are c. 0.45 m in length and <0.08 m in width. Filling the cist area is a moderately-compacted, dark brownish grey silty clayey soil with frequent charcoal flecking. The dimensions of this area are 0.80 x 0.63 by 0.13 m in thickness. The deposit overlying (209) either as a backfill or a natural soil accumulation (210) comprises a moderately-compacted, dark brownish grey silty clayey soil with frequent charcoal flecking.

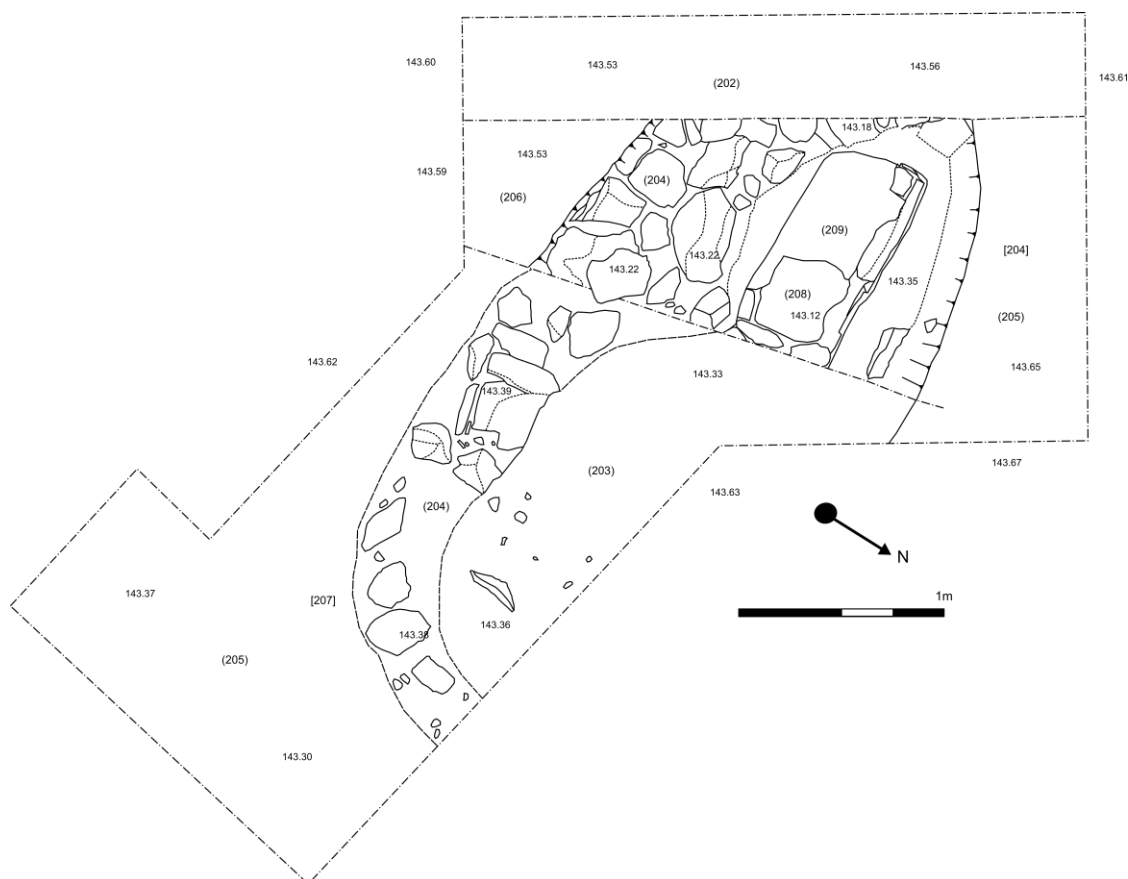


Figure 12. Plan of Trench 2, showing the stone alignment (204) and the cist (208) and (209)

<sup>8</sup> Excavation of this structure will resume in the 2012 season.

### 7.13 TRENCH 3

Trench 3, measuring 1 x 1m square was located east of Trench 2 (Figure 13). The rationale for this trench was to trace the extent of an east-west stone alignment (204) which had recorded in Trench 2. The eastern extent of this feature in Trench 2 was considered to extend towards the area where Trench 3 was located. Towards the latter part of the excavation programme it was decided to amalgamate Trench 2 and Trench 3 together via an extension which followed the stone alignment. The depth of the trench extended around 0.35 m below the ground surface and as a result no archaeology was found. Despite this, three contexts were recorded, the first of these was the topsoil (301) – identical to topsoil deposits in Trenches 1 and 2. Underlying this deposit was a buried plough soil (302); identical to the buried plough soils in Trenches 1 and 2, followed by natural deposits (303).

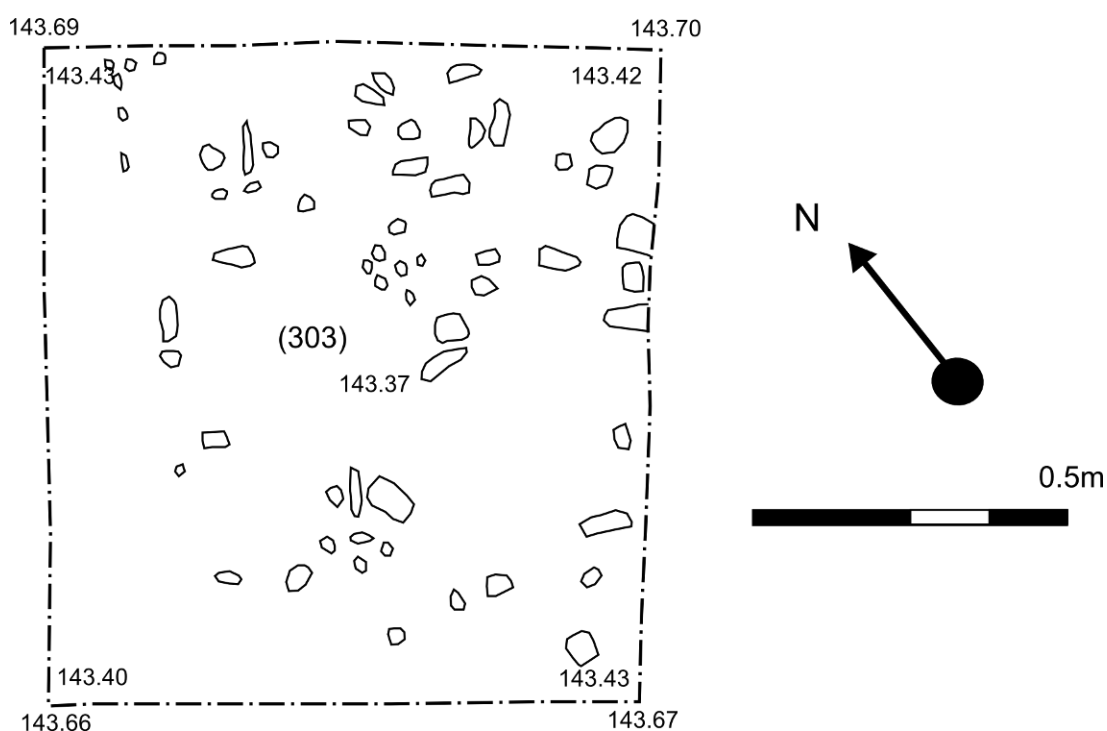


Figure 13. Plan of Trench 3 showing the base deposits

## 8.0 SUMMARY

- 8.1 Prior to the fieldwork undertaken by the team in 2010, little was known about the Trefael Stone. Frances Lynch had made reference that the Trefael Stone was probably a capstone that once belonged to a Neolithic burial-ritual monument. Similar suggestions had also been made by Children and Nash (1997) and Nash (2006). The site had been previously investigated, albeit superficially by Grimes (1929) and Barker (1992). Barker had made the first attempt to accurately record the cupmarks. It was from this short report in Barker (1992) that the authors decided to apply for SMC in order to excavate an area immediately east of the stone in 2010; to expose the full extent of the capstone. The results of this fieldwork were reported in a document submitted to Cadw in April 2011 and as a peer-reviewed paper in *Adoranten* (2011) and *Archaeology in Wales* (forthcoming). Revealed was the eastern section of a possible kidney-shaped cairn which clearly belongs to an early Neolithic burial-ritual monument, probably a Portal Dolmen (as reported in the 2010 Cadw report). An excavation slot abutting the stone assisted in revealing at least 75 cupmarks (**Plates 1 & 9**). In addition to these features the excavation team also recovered two perforated slate beads that were probably Mesolithic in date, suggesting the sites continuity of use over a long period of prehistoric time (Nash *et al.* 2011). The positive results of the 2010 season prompted the team to return to the site in 2011.
- 8.2 The 2011 excavation season and the subsequent geophysical survey revealed significant results from two of the three trenches excavated including probable human remains and Late Neolithic/Early Bronze Age pottery sherds (**Plate 3**) from Trench 1 and a stone alignment and probable Bronze Age cist burial in Trench 2 (**Plates 5 & 6**). The bone and pottery from Trench 1 were found within an area where several features were also excavated including a ditch or gully that is possibly associated with the nearby Trefael Stone Portal Dolmen. Features from this trench and Trench 2 were initially targeted through geophysical survey.
- 8.3 The geophysical survey from the 2010 season investigated a 10 x 10 m area immediately east of the stone. During this programme the inclement weather may have had a bearing on the results. Based on verbal recommendations from Cadw the geophysical survey included a sweep of the most of the western section of the field and most of the northern extent of the field to the south (where a standing stone once stood – see Figure 1). The results from both fields were complex and confusing and currently post-field results are being re-analysed. However, a number of positive anomalies were recorded around the northern area of the Trefael Stone; two of these areas were targeted for excavation – Trenches 1 and 2 (**Plate 4**).
- 8.4 According to the landowner, Ms Gill Richards, a standing stone once stood in a field immediately to the south. Indeed this monolith is present on several Ordnance Survey maps including the 1889 map (Scale 1:2500) (Figure 2). Ms Richards' father Hubert Richards remembers removing the stone some 30-40 years ago and placing it on top of a field boundary close to a gated entrance that provides access between the two fields; located c. 25 m south of the Trefael Stone. On the 26<sup>th</sup> September 2011, members of the team located this stone, several metres south of the southern extent of the gated entrance to the southern field (**Plate 7**). The stone was duly photographed. As part of the final fieldwork

season in 2012, the team will officially record this lost monument. It is our view the both this monolith and the Trefael Stone are contemporary and integral to this potentially complex later prehistoric landscape.

8.5 The initial interest by the directors of this project was to merely record the cupmarks on the capstone (above and below the ground level). According to Barker (1992) the Trefael Stone contained c. 45 cupmarks of varying shape and size. Recording of the Trefael Stone commenced in 2010 and was completed during the 2011 season. The tracing, using the 'Valcamonica' method yielded 75 cupmarks (**Plates 8 & 9**).<sup>9</sup> The reporting of this task and a summary of the 2010 excavation season is in Nash *et al.* (2011).

8.6 The 2012 Season will commence in late September and include the following tasks:

- To complete the excavation, recording and sampling of Trenches 1 and 2 (in particular, to retrieve probable human bone for radiocarbon sampling);
- To extend Trench 1 to the south in order to expose more of the probable cairn spread associated with the Portal Dolmen. Note, this trench extension will not extend into the Scheduled Monument area of the Trefael Stone site;
- To extend the excavation along the western side of Trench 2 in order to expose more of the linear stone feature and the western side of the cist;
- To excavate two 2 x 2 m trenches over large anomalies that were recognised within the 2011 geophysical survey, located north-west of Trench 1 and south-east of the Trefael Stone (see Figure 6);
- To produce the final interim report for this phase of the fieldwork (to be issued within six months of completion of the fieldwork, and to include any specialist reports [ceramics, chronometric dating, geophysics, lithics, osteology]); and
- To consider the production of a monograph that will chart the archaeological history of the monument, in particular the non-intrusive fieldwork and the logistics, methods and results of the three excavation seasons (2010-2012).

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<sup>9</sup> A full survey of the stone was undertaken by Carol James and George Nash

## 9.0 REFERENCES

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## **10.0 ACKNOWLEDGMENTS**

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## **11.0 CLOSURE**

This report has been prepared by co-directors Dr George Nash, Adam Stanford and Thomas Wellicome with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the above; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from the authors.

We disclaim any responsibility to Cadw and DAT and others in respect of any matters outside the agreed scope of the work.

## PLATES



Plate 1. The complete exposure of the upper surface of the Trefael Stone, image taken during the 2010 excavation season - looking west



Plate 2. Excavating Trench 1, revealing probable human remains and prehistoric pottery



Plate 3. Late Neolithic/EBA decorated pottery sherd from Trench 1



Plate 4. Phil Dell testing for sub-surface anomalies around Trench 2, looking north



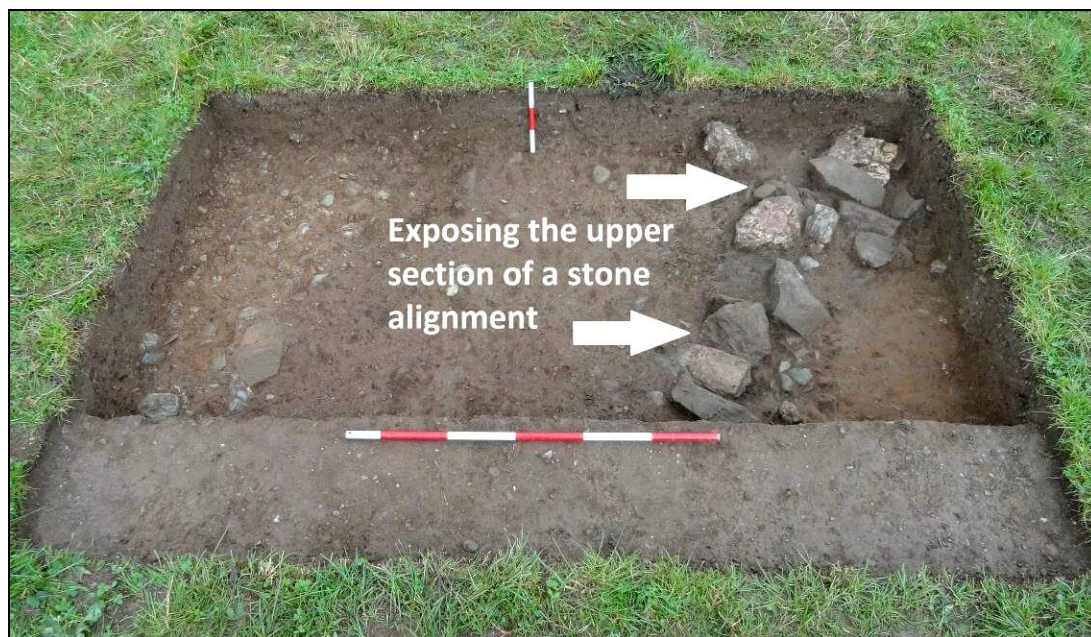


Plate 5. Eastern section of Trench 2, looking east

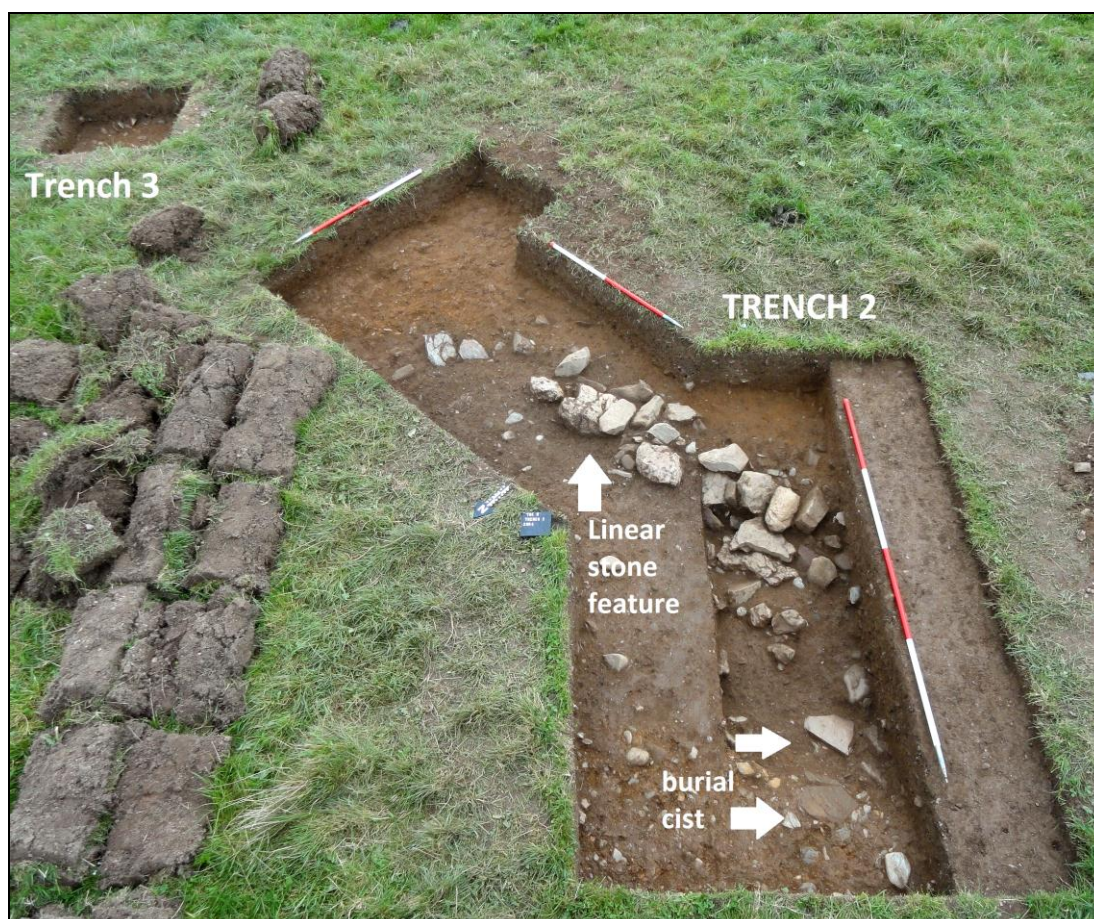


Plate 6. Extent of Trench 2 prior to amalgamation with Trench 3, looking south



Plate 7. The discovery of the missing standing stone from a field immediately south of the site

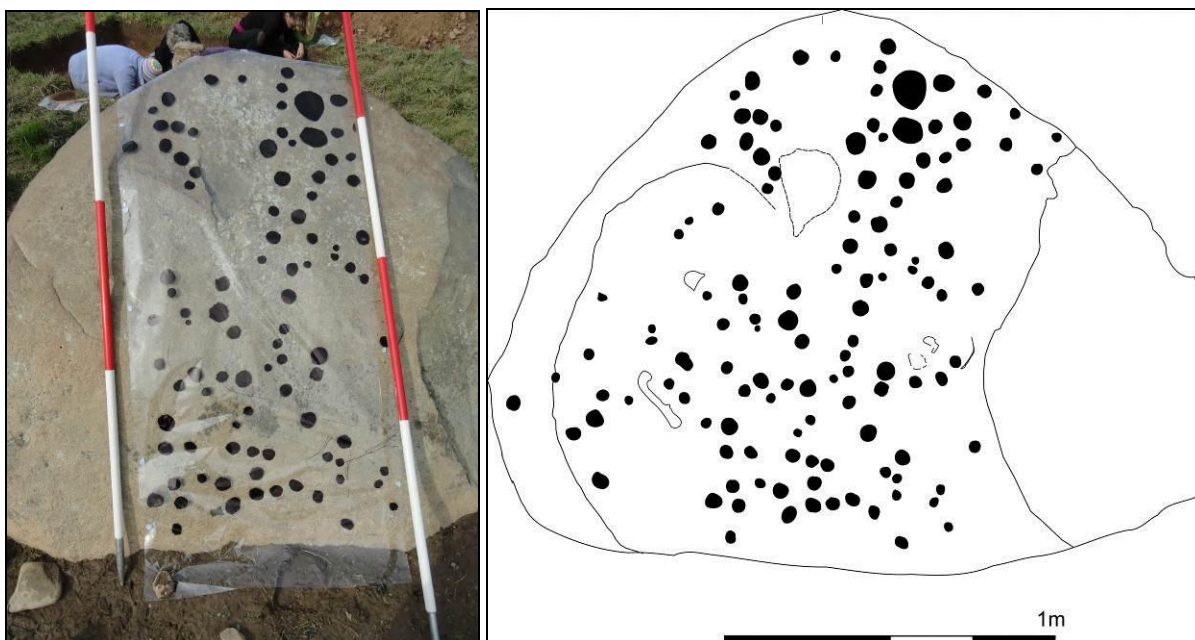


Plate 8. Acetate record of the cupmarks on the Trefael Stone

Plate 9. The completed tracing (by George Nash and Carol James)

## APPENDIX 1- CONTEXT SUMMARY

### CONTEXT REGISTER – TRENCH 1

Context Number	Description
101	Loosely-compacted/ friable, medium reddish brown silty sand with occasional small stones and quartz. Dimensions: 3.0 x 2.0 x 0.10m.
<b>Interpretation</b>	<i>Topsoil</i>
102	Loosely-compacted light brown clayey sand. Occasional quartz, chert and frequent small angular stones. Dimensions: 3.0 x 2.0 x 0.33m.
<b>Interpretation</b>	<i>Plough disturbed sub-soil</i>
103	Moderately-compacted light reddish brown sandy silt, with occasional charcoal flecking, quartz pebbles, and small rounded pebbles. Occasional prehistoric pot. Dimensions: 3.0 x 2.0 x 0.10m.
<b>Interpretation</b>	<i>Sub-soil</i>
104 <sup>10</sup>	Cut – Shape in plan: Elliptical? Not fully exposed. Dimensions: 0.80 x 0.50 x 0.36m. Break of slope top: Sharp. Sides: Steeply sloping. Break of slope base: Sharp. Base: Appears 'V' shaped. Orientation: NW – SE. Inclination of Axis: NA. Truncated: NA. Filled by 105.
<b>Interpretation</b>	<i>Cut of possible Neolithic/Bronze Age stone setting</i>
105	Loosely-compacted, mid-brown sandy clay with moderate to frequent small to medium sized angular stones and occasional shale. Dimensions: 0.80 x 0.50 x 0.36m.
<b>Interpretation</b>	<i>Fill of possible stone setting cut [104]</i>
106	Cut – Shape in plan: Roughly circular/sub-circular. Dimensions: 0.15 x 0.15 x 0.07m. Break of slope top: Sharp. Sides: Steeply sloping. Break of slope base: Moderate. Base: Flat to undulating. Orientation: Unknown. Inclination of axis: Vertical. Truncated: Unknown, there appears to be animal disturbance into this area from the overlying deposit 103, but this is not well defined. Filled by: 107.
<b>Interpretation</b>	<i>Cut of possible pit/ stake hole</i>
107	Loosely- to moderately-compacted light brown sandy clay with moderate quantities of slate and shale, occasional rounded pebbles. Dimensions: 0.15 x 0.15 x 0.07m.
<b>Interpretation</b>	<i>Fill of possible post/stake hole [106]. The shale within this stake hole may possibly be arranged in a lining, with shale appearing to be laid in a thin layer around the edges of the stake hole</i>
108	Cut – Shape in plan: Irregular. Corners: Rounded. Dimensions: 1.0 x 0.61 x >0.30m. Break of slope top: Moderate. Sides: Steeply sloping. Break of slope base: Unexcavated. Base: Unexcavated. Orientation: E – W. Inclination of axis: NA. Truncated: Not ascertained, possibly by animal activity. Filled by: 109.
<b>Interpretation</b>	<i>Cut of unknown feature potentially relating to portal dolmen activity. Not fully excavated</i>
109	Loosely-compacted mid-brown silty sandy clay with occasional charcoal flecking, slate and shale and small sub-angular and sub-rounded stones. Occasional prehistoric pot. Occasional small bone (possibly human). Dimensions: 1.0 x 0.61 x >0.30m.
<b>Interpretation</b>	<i>Fill of linear ditch/gully 109. Excavation of this feature was stopped after potentially human bone was located</i>
110	Loosely-compacted mixture of silty clay and angular and sub-angular stones.

<sup>10</sup> Note: Features (104), (106) and (108), lie underneath a possible geophysical outline of the Portal Dolmen and probably are heavily disturbed features associated with site.

	Occasional charcoal flecks and prehistoric pot. Dimensions: >0.70 x >0.50 x Not excavated.
<b>Interpretation</b>	<i>Appears to be remnants of cairn material, heavily disturbed that, at least partially covers 108/109</i>
111	Loosely-compacted mid-orangey brown sand with moderate amounts of flat shale. Dimensions: >2.50 x >2.0 x Not excavated.
<b>Interpretation</b>	<i>Natural deposits</i>

## CONTEXT REGISTER – TRENCH 2

<b>Context Number</b>	<b>Description</b>
201	Moderately-compacted, mid-brown silty clay with occasional sub-angular stones. Dimensions: 3.0 x 2.0 x 0.05m.
<b>Interpretation</b>	<i>Topsoil</i>
202	Moderately-compacted, mid-brown silty clay with moderate amounts of small to medium sized stone inclusions. Dimensions: 3.0 x 2.0 x 0.20m.
<b>Interpretation</b>	<i>Sub-soil</i>
203	Moderately-compacted, mid-brown mixture of sub-angular and rounded stones within a silty clay matrix. Some animal disturbance. Dimensions: 3.0 x 2.0 x <0.30m.
<b>Interpretation</b>	<i>Upper fill of pit [207]? Not fully excavated.</i>
204	Moderately-compacted, dark brown silty clay with moderate shale and stone inclusions (variable in origin, including quartz and river-worn/ glacial cobbles). Dimensions: 3.05 (exposed) x c. 0.80 x >0.35m
<b>Interpretation</b>	<i>Full nature not determined, may represent a backfill of material around cist style burial chambers</i>
205	Moderately compacted, orangey brown sandy clay with occasional small stones. Dimensions: >3.0 x >2.0 x >0.05m.
<b>Interpretation</b>	<i>Natural deposit</i>
206	Loosely-compacted mid-orangey brown sand with moderate amounts of flat shale. Dimensions: >0.85 x >0.70 x Not excavated.
<b>Interpretation</b>	<i>Possibly a natural glacial deposition/natural, although it appears 'clean' in nature compared to surrounding material</i>
207	Cut – Shape in plan: Not fully exposed but appears oval. Dimensions: >3.80 x 2.0 x >0.06m. Break of slope top: Sharp. Sides: Steep, nr. Vertical. Break of slope base: Unexcavated. Base: Unexcavated. Orientation: E – W. Inclination of axis: NA. Truncation: Not truncated, although disturbed by animal activity.
<b>Interpretation</b>	<i>Cut of 'grave'/ cist burial pit 208</i>
208	Stone structure – Consists of at least 1 x possible capstone and buried uprights. Stone appears consistent with local geology. 'Capstone': c. 0.40m in diameter. Supports appear to be c. 0.45m in length and <0.08m in width. No obvious bonding material or bond type was observed.
<b>Interpretation</b>	<i>Appears to be remains of secondary burials associated with the passage grave/ portal dolmen. Probably cist burials</i>
209	Moderately-compacted, dark brownish grey silty clay with frequent charcoal flecking. Dimensions: 0.80 x 0.63 x 0.13m.
<b>Interpretation</b>	<i>Fill of structure 208</i>
210	Moderately-compacted, mid-orangey brown sandy silty clay with occasional charcoal and small stones. Dimensions: >1.20 x >1.10 x Not excavated.
<b>Interpretation</b>	<i>Possible backfill material associated with stone cists/ burials</i>

**CONTEXT REGISTER – TRENCH 3**

<b>Context Number</b>	<b>Description</b>
301	Loosely-compacted/friable, medium reddish brown silty sand with occasional small stones and quartz. Dimensions: 3.0 x 2.0 x 0.10m.
<b>Interpretation</b>	<i>Topsoil</i>
302	Moderately-compacted, mid-brown silty clay with moderate amounts of small to medium sized stone inclusions. Dimensions: 3.0 x 2.0 x 0.20m.
<b>Interpretation</b>	<i>Plough disturbed sub-soil</i>
303	Loosely-compacted mid-orangey brown sand with moderate amounts of flat shale. Dimensions: 3.0 x 2.0 x Not excavated.
<b>Interpretation</b>	<i>Natural</i>

**APPENDIX 2 – HARRIS MATRICES FOR EACH TRENCH**

